## PATENT COOPERATION TREATY

# **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

1 **	nt's or age	nt's file referen	ace	FOR FURTHER A	CTION	See Form PCT/IPEA/416			
		ication No.		International filing da					
PCT	/EP20	004/013	444	26.11.200	4	18.12.2003			
	International Patent Classification (IPC) or national classification and IPC  B22D11/115								
Applica SMS		AG AG							
1.	1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.								
2.	This RE	PORT consists	of a total of	5	sheets, incl	luding this cover sheet.			
3.	This rep	ort is also acco	mpanied by A	NNEXES, comprising:					
	a. 🛚	(sent to the	applicant and	to the International Bu	reau) a total of 4	sheets, as follows:			
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental								
	ь. 🗌	Box. (sent to the	International	Bureau only) a total of (	(indicate type and m	umber of electronic carrier(s))			
		,			`				
	, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).								
4.	This rep	ort contains inc	lications relati	ng to the following iten	ns:				
		Box No. I	Basis of the	report					
		Box No. II	Priority						
		Box No. III	Non-establi	shment of opinion with	regard to novelty, in	nventive step and industrial applicability			
		Box No. IV	Lack of uni	ty of invention	finvention				
	Box No. V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement								
		Box No. VI	Certain doc	uments cited					
	Box No. VII Certain defects in the international application								
	Box No. VIII Certain observations on the international application								
Date of submission of the demand				Date of completion	of this report				
Name and mailing address of the IPEA/EP					Authorized officer				
Facsimile No.					Telephone No.				

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/013444

Box	No. I	Basis of the report									
1.		n regard to the <b>language</b> , this report is based on the internation cated under this item.	onal application in the language in	which it was filed, unless otherwise							
		This report is based on translations from the original langu which is the language of a translation furnished for the pur		,							
		international search (Rule 12.3 and 23.1(b))									
		publication of the international application (Rule 12.	4)								
		international preliminary examination (Rule 55.2 and	d/or 55.3)								
2.	recei		regard to the <b>elements</b> of the international application, this report is based on (replacement sheets which have been furnished to the ving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to enort.								
		the international application as originally filed/furnished									
	$\boxtimes$	the description:									
		pages _ 2,5,6		as originally filed/furnished							
		pages* 1,3,4	received by this Authority on	12.10.2005 with telefax							
		pages*	received by this Authority on								
	$\boxtimes$	the claims:	_								
		nos.		as originally filed/furnished							
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				12.10.2005 with							
	$\square$	nos.*	_ received by this Authority on								
		the drawings:									
		sheets 1/1									
		sheets*	received by this Authority on								
		sheets*	received by this Authority on								
	Ш	a sequence listing and/or any related table(s) – see Suppler	mental Box Relating to Sequence L	isting.							
3.		The amendments have resulted in the cancellation of:									
		the description, pages									
		the claims, nos.									
		Also describes also de (Gine									
		the sequence listing (specify):									
		any table(s) related to sequence listing (specify):									
4.		This report has been established as if (some of) the amen they have been considered to go beyond the disclosure as f									
		the description, pages									
		the claims, nos.									
		the drawings, sheets/figs									
		the sequence listing (specify):									
*	If ite	em 4 applies, some or all of those sheets may be marked "sup									

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/013444

Box		statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; and explanations supporting such statement	
1.	Statement		
	Novelty (N)	Claims 1,2	YES
		Claims	
	Inventive step (IS)	Claims 1,2	YES
		Claims	
	Industrial applicability	y (IA) Claims 1,2	YES
		Claims	
2	Citation and analysis a	- (D-1- 70 7)	
2.	Citations and explanations		
		This report makes reference to the following	
	(	documents:	
	Ţ	D1: EP 0 568 579 A (ASEA BROWN BOVERI AG)	
	1	10 November 1993 (1993-11-10)	
	Ţ		
	1		
		September 1989 (1989-09-29)	
	1	D3: WO 03/028925 A (SMS DEMAG	
		AKTIENGESELLSCHAFT; EBERWEIN, KLAUS-	
		PETER) 10 April 2003 (2003-04-10)	
	2 1	Novelty and inventive step, PCT Article 33(2)	
a cor		D1 is regarded as the prior art and discloses	
		a continuous casting mold in which permanent	
		magnets (15b) are attached to the mold (11)	
		(figure 1) in order to influence the flow of	
	f	the liquid metal.	
	I	D1 offers two alternative solutions for	
	•	varying the field strength:	
	-	- The magnets themselves can be slid into	
		slots in the water chamber (claim 7, column	
		6, lines 39-57), or	

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- displaceable core elements can be inserted into the magents (claim 7, column 6, line 58 to column 7, line 6).

Furthermore, D1 indicates that the permanent magnets are arranged in or near the water chamber (14) (column 6, lines 15ff.).

In D1, the permanent magnets are attached to the mold so as to be adjacent thereto or adjoining therewith.

Therefore, D1 also describes all of the characterizing features of the preamble of claim 1.

D1 describes and shows only translational movements of the permanent magnets.

Therefore, the pivotable adjusting means according to the characterizing part of claim 1 are novel.

Consequently, the problem of providing means for varying the field strength of the permanent magnets is solved in a different manner. The rotation causes the field strength to be additionally reduced in comparison to a translational movement, thereby rendering it easier to remove the magnets.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Although in D3 electromagnets are applied to the mold in a pivoting motion, in this case, the magnets and the rotation device or applying device are not attached to the mold, owing to the weight issue during oscillation.

Although according to D2 the magnets are rotated, it is not in order to adjust the field strength.

Therefore none of the additionally cited documents renders it obvious to use pivotable adjusting means according to claim 1.

#### 3. Additional observations

After the amendment of the claims, the pivoting motion is not merely a preferred embodiment. Therefore the word "preferably" on page 4, line 29 should be deleted when the application enters a regional phase, as should the embodiment of the rotatable spindles (line 30).